

Docket No. 13761-7024

TECH CENTER 1600/2900

MAR 21 2002

RECEIVED

Certificate of Mailing/Transmission (37 C.F.R. § 1.8(a)):

[X] Pursuant to 37 C.F.R. § 1.8, I hereby certify that this paper and all enclosures are being deposited with the United States Postal Service as first class mail on the date indicated below in an envelope addressed to the Assistant Commissioner for Patents, Washington D.C. 20231.

[] Pursuant to 37 C.F.R. § 1.6(d), I hereby certify that this paper and all enclosures are being sent via facsimile on the date indicated below to the attention of Examiner _____ at Facsimile No. _____ at _____ a.m./p.m.

Dated: February 11, 2002

Name of Person Certifying: Laer Barrett

Printed Name: LAER BARRETT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lin, et al.

Assignee: University of Southern California

Filing Date: 08/01/2001

Examiner: Unassigned

Serial No.: 09/920,342

Group Art Unit: 1653

Title: GENE SILENCING USING MRNA-CDNA HYBRIDS

Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED

MAR 04 2002

INFORMATION DISCLOSURE STATEMENT

TECH CENTER 1600/2900

Sir:

In accordance with 37 C.F.R. § 1.56, the references listed on the attached Form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application.

I. Timing of the Information Disclosure Statement:

This Information Disclosure Statement is filed:

- ☐ With the new patent application submitted herewith (37 C.F.R. § 1.97(a)).
- ☐ Within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 C.F.R. § 1.491.
- ☐ Before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114.
- ☒ Before the mailing of a first Office action on the merits. In the event, however, that an Office Action has crossed in the mail with this Information Disclosure Statement:
 - ☒ the Commissioner is hereby authorized to charge Deposit Account No. 50-1192, Docket No. 13761-7024 for the fee (\$180) set forth in 37 C.F.R. § 1.17(p) and any additional required fees.

RECEIVED

MAR 21 2002

TECH CENTER 1600 290

☐ a statement as specified in 37 C.F.R. § 1.97(e) is provided below.

This Information Disclosure Statement is filed:

☐ After the first Office Action and more than three months after the application's filing date; or PCT national stage date of entry filing, or after the mailing of a first Office Action after the filing of a request for continued examination, but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and

☐ the Commissioner is hereby authorized to charge Deposit Account No. [] for the fee (\$180) set forth in 37 C.F.R. § 1.17(p) and any additional required fees.

☐ a statement as specified in 37 C.F.R. § 1.97(e) is provided below.

This Information Disclosure Statement is filed:

☐ After the mailing date of either a final rejection or a notice of allowance, whichever occurred first, but on or before the payment of an issue fee, and is accompanied by the fee (\$180.00) set forth in 37 C.F.R. § 1.17(i)(1) and a certification as specified in 37 C.F.R. § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the Information Disclosure Statement.

Pursuant to 37 C.F.R. § 1.97(e), the undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was first cited in any communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

☐ No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

II. Copies of the Cited Items:

☒ Copies of all of the items listed on the attached Form PTO-1449 are enclosed.

☐ Copies of only the following items listed on the attached Form PTO-1449 are enclosed: _____.

☐ Copies of those items which are marked with an asterisk (*) in the attached Form PTO-1499 are not supplied because they were previously cited by or submitted to the Patent Office in a prior Application No. _____, filed _____ and relied

upon in this application for an earlier filing date under 35 U.S.C. § 120.
See 37 C.F.R. § 1.98(d).

- ☐ Copies of those items which are marked with an asterisk (**) in the attached Form PTO-1499 were cited in a foreign examination report in a related case. A copy of the search report and the cited references not already of record in this application are attached hereto.

III. Concise Explanation of Relevance:

- ☒ A concise explanation of relevance of the items listed on Form PTO-1449 is not given.
- ☐ A concise explanation of relevance of [some of] the items listed on Form PTO-1449 is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references (copy attached).

IV. Conclusion:

Citation of the above documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described above; or
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

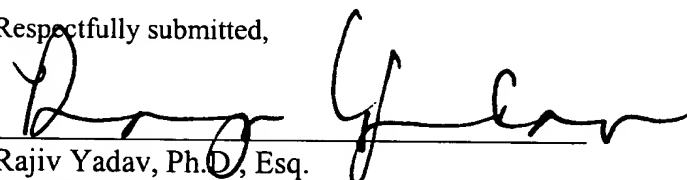
It is respectfully requested that the Examiner indicate consideration of the cited references by returning a copy of the attached form PTO 1449 with initials or other appropriate marks.

The Commissioner is hereby authorized to charge Deposit Account No. 50-1192, Docket No.: 13761-7024 for any additional fees required in connection with the filing of this Information Disclosure Statement.

DATE: February 11, 2002

Respectfully submitted,

By:


Rajiv Yadav, Ph.D., Esq.
Registration No. 43,999

McCutchen, Doyle, Brown & Enersen, LLP
Three Embarcadero Center, 18th Floor
San Francisco, California 94111
Telephone: (415) 393-2000
Telefax: (415) 393-2286

ATTY. DOCKET NO.

13761-7024

SERIAL NO.

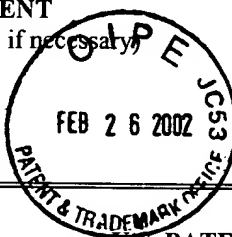
09/920,342

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT(S)' INFORMATION DISCLOSURE
STATEMENT

RECEIVED

MAR 04 2002

TECH CENTER 1600/2900



INVENTOR

Lin, et al.

FILING DATE

08/01/2001

GROUP ART UNIT

1653

TECH CENTER 1600/2900

MAR 21 2002

RECEIVED

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAM'R INITIAL		DOCUMENT NUMBER	DATE	NAME	Class	Subclass	Filing Date If Appropriate
	A1.	6,197,554	03/06/2001	Lin, et al.	435	91.1	11/20/1998
	A2.	5,322,770	06/21/1994	Gelfand	435	6	12/22/1989
	A3.	5,075,216	12/24/1991	Innis, et al.	435	6	09/23/1988
	A4.	4,965,188	10/23/1990	Mullis, et al.	435	6	06/17/1987
	A5.	4,683,202	11/27/1990	Mullis	435	91	10/25/1985
	A6.	4,683,195	07/28/1987	Mullis, et al.	435	6	02/07/1986

FOREIGN PATENT DOCUMENTS

EXAM'R INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	Subclass	TRANSLAT'N	
							yes	no
	B1							
	B3							
	B2							
	B4							

OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

✓	C1.	Wargelius, A., et al., "Double Stranded RNA Induces Specific Developmental Defects in Zebrafish Embryos," <i>Biochemical and Biophysical Research Communications</i> , 263 , 156-161 (1999)	✓
✓	C2.	Myers, et al., "Reverse Transcription and DNA Amplification by a Thermus Thermophilus DNA Polymerase," <i>Biochemistry</i> , 30 :31, 7661-7666 (1991)	✓
✓	C3.	Grant, S. R., "Dissecting the Mechanisms of Posttranscriptional Gene Silencing: Divide and Conquer," <i>Cell</i> , 96 , 303-306 (1999)	✓
✓	C4.	Kennerdell, J.R., et al., "Use of dsRNA-Mediated Genetic Interference to Demonstrate that frizzled and frizzled 2 Act in the Wingless Pathway," <i>Cell</i> , 95 , 1017-1026 (1998)	✓
✓	C5.	Ketting, R.F., et al., "mut-7 of C. elegans, Required for Transposon Silencing and RNA Interference, is a Homolog of Werner Syndrome Helicase and RNaseD," <i>Cell</i> , 99 , 133-141 (1999)	✓
✓	C6.	Pal-Bhadra, M., et al., "Cosuppression of Nonhomologous Transgenes in Drosophila Involves Mutually Related Endogenous Sequences," <i>Cell</i> , 99 , 35-46 (1999)	✓
✓	C7.	Tabara, H., et al., "The rde-1 Gene, RNA Interference, and Transposon Silencing in C. elegans," <i>Cell</i> , 99 , 123-132 (1999)	✓
✓	C8.	Zamore, P.D., et al., "RNAi: Double-Stranded RNA Directs the ATP-Dependent Cleavage of mRNA at 21 to 23 Nucleotide Intervals," <i>Cell</i> , 101 , 25-33 (2000)	✓
✓	C9.	Smardon, A., et al., "EGO-1 is Related to RNA-Directed RNA Polymerase and Functions in Germ-Line Development and RNA Interference in C. Elegans," <i>Current Biology</i> , 10 , 169-178 (2000)	✓
✓	C10.	Yang, D., et al., "Evidence that Processed Small dsRNAs May Mediate Sequence-Specific mRNA Degradation During RNAi in Drosophila Embryos," <i>Current Biology</i> , 10 , 1191-1200 (2000)	✓
✓	C11.	Modahl, L.E., et al., "RNA-Dependent Replication and Transcription of Hepatitis Delta Virus RNA Involve Distinct Cellular RNA Polymerases," <i>Molecular and Cellular Biology</i> , 20 (16), 6030-6039 (2000)	✓
✓	C12.	Sambrook et al., "Molecular Cloning: Northern Hybridization," 2 nd Ed., Cold Spring Harbor Laboratory Press, 7.39-7.52 (1989)	✓

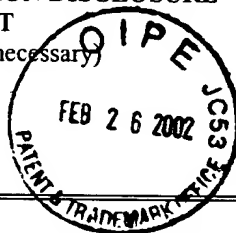
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant(s).

**LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT(S)' INFORMATION DISCLOSURE
STATEMENT**

(Use several sheets if necessary)



ATTY. DOCKET NO.

13761-7024

SERIAL NO.

09/920,342

INVENTOR

Lin, et al.

FILING DATE

08/01/2001

GROUP ART UNIT

1653

RECEIVED
 MAR 21 2002
 TECH CENTER 1600/2900

✓	C13.	Chamberlin, M., et al., "New RNA Polymerase from Escherichia Coli Infected with Bacteriophage T7," <i>Nature</i> 228 , 227-231 (1970)	✓
✓	C14.	Cogoni, C., et al., "Gene Silencing in Neurospora Crassa Requires a Protein Homologous to RNA-Dependent RNA Polymerase," <i>Nature</i> , 399 , 166-169 (1999)	✓
✓	C15.	Compton, J., "Nucleic Acid Sequence-Based Amplification," <i>Nature</i> , 350 , 91-92 (1991)	✓
✓	C16.	Fire, A., et al., "Potent and Specific Genetic Interference by Double-Stranded RNA in Caenorhabditis Elegans," <i>Nature</i> , 391 , 806-811 (1998)	✓
✓	C17.	Wianny, F., et al., "Specific Interference with Gene Function by Double-Stranded RNA in Early Mouse Development," <i>Nature Cell Biology</i> , 2 , 70-75 (2000)	✓
✓	C18.	Embleton, M.J., et al., "In-Cell PCR from mRNA: Amplifying and Linking the Rearranged Immunoglobulin Heavy and Light Chain V-Genes within Single Cells," <i>Nucleic Acids Research</i> , 20 (15), 3831-3837 (1992)	✓
✓	C19.	Lin, S.-L., et al., "In Vivo Analysis of Cancerous Gene Expression by RNA-Polymerase Chain Reaction," <i>Nucleic Acids Research</i> , 27 (23) 4585-4589 (1999)	✓
✓	C20.	Eberwine, J., et al., "Analysis of Gene Expression in Single Live Neurons," <i>Proc. Natl. Acad. Sci. USA</i> , 89 , 3010-3014 (1992)	✓
✓	C21.	Kacian, D.L., et al., "A Replicating RNA Molecule Suitable for a Detailed Analysis of Extracellular Evolution and Replication," <i>Proc. Nat. Acad. Sci. USA</i> , 69 (10), 3038-3042 (1972)	
✓	C22.	Misquitta, L., et al., "Targeted Disruption of Gene Function in Drosophila by RNA Interference (RNA-i): A Role for Nautilus in Embryonic Somatic Muscle Formation," <i>Proc. Natl. Acad. Sci. USA</i> , 96 , 1451-1456 (1999)	
✓	C23.	Filipovska, J., et al., "Specific HDV RNA-Templated Transcription by Pol II In Vitro," <i>RNA</i> , 6 , 41-54, (2000)	
✓	C24.	Grishok, A., et al., "Genetic Requirements for Inheritance of RNAi in C. Elegans," <i>Science</i> , 287 , 2494-2497 (2000)	
✓	C25.	Shimoda-Matsubayashi, et al., "Structural Dimorphism in the Mitochondrial Targeting Sequence in the Human Manganese Superoxide Dismutase Gene: A Predictive Evidence for Conformational Change to Influence Mitochondrial Transport and a Study of Allelic Association in Parkinson's Disease," <i>Biochemical and Biophysical Research Communications</i> , 226 , 561-565, Art. No. 1394, (1996)	
✓	C26.	Ambrosone, C.B., et al., "Manganese Superoxide Dismutase (MnSOD) Genetic Polymorphisms, Dietary Antioxidants, and Risk of Breast Cancer," <i>Cancer Research</i> , 59 , 602-606, (1999)	
✓	C27.	Lin, S.-L., et al., "Differentially Expressed Genes in Activin-Induced Apoptotic LNCaP Cells," <i>Biochemical and Biophysical Research Communications</i> , 257 , 187-192 (1999)	

RECEIVED

MAR 04 2002

TECH CENTER 1600/2900

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant(s).